

EPO - DG 1

26. 05. 2005

**DECLARATION**

(76)

I, the undersigned: R.H. Riemens

sworn Netherlands Patent Attorney of:

Exter Polak & Charlouis B.V.  
295A, Sir Winston Churchilllaan  
Rijswijk, The Netherlands,

hereby declare:

- that I am conversant in the Dutch and English languages;
- that the attached 4 pages contain a true and faithful translation - made at the best of my ability - of

Netherlands Patent Application No. 1022079

filed 4 December 2002

relating to:

"Device for the removal of weed from joints of a paving".

done at Rijswijk, May 12, 2005



R.H. Riemens

Title: Device for the removal of weed from joints of a paving.

5 The invention relates to a device for the removal of weed from joints of a paving, which device comprises a construction around a hand drilling machine which is provided with a rotary steel brush, which machine is held in a machine clamp comprising a wing nut, to which clamp a support frame having a wheel is  
10 mounted for support of the machine with the rotary brush, and to which clamp also a shank of adjustable length with handle is mounted, to which shank in the proximity of the machine clamp a bracket clamp with wing bolt is mounted in which a protective cover for the rotary steel brush can be mounted.

15

The professional removal of weeds from joints of a paving involves the use of heavy steerable machines which are provided with one or more rotating cup-like steel brushes with vertical axes of rotation, or with specifically designed equipment for  
20 the gardener. Also at small-scale weeds are manually removed using a scraper or blade, optionally attached to a shank with a handle.

The objects of the invention is to provide for a simple device  
25 of which weeds can be removed at a more comfortable manner, using a simple rotary steel brush mounted in a drill head of a hand drilling machine or the like and driven by the same.

It is noted that the US Patent US5842331 describes a machine in  
30 which also a rotary steel brush is used, although as part of a more professional machine for maintenance of the garden.

The device according to the invention will be explained in more detail with reference to a number of figures. These figures in  
35 no way serve as a limitation of the scope of protection, but show a possible embodiment thereof.

Figure 1 shows a perspective view of an embodiment of the device of which standard elements as motor and rotary brush are  
40 indicated by dashed lines "transparently".

Figure 2 shows a front view of the device in full.

Figure 3 shows a person removing weed from joints using the device. The device according to the invention comprises a machine clamp 1, which clamp is provided with a wing nut 2 and in which clamp 1 a handheld drill or similar feature can be fixed using the wing nut 2. A standard steel brush with axis 13 is fixed in the drill head 12b of the machine 12.

10

A support frame 3 with a small wheel 4, for supporting the machine 12 is fixedly connected to the clamp 1. A shank 5 with handle 10, which may be of adjustable length, is also fixedly connected to the clamp 1. At its underside, close to the attachments to the machine clamp 1, the shank 5 is provided with a bracket 8 with wing bolt 9 for securing a guard 6 around the rotating brush 13, to which end the guard 6 is provided with an arm 7 which can be pushed so that it fits into the bracket 8 and fixed in place using the wing bolt 9. The guard 6 is provided with a flexible mud flap 6b and with an arrow 6a. The guard 6 is fixed into the bracket 8 using the arm 7 in such a manner that the arrow 6a lies precisely in the plane of the rotating brush 13 in order to indicate the position of the brush 13 with respect to the joints V in the pavement as from which weeds W are to be removed.

25

Figures 1 and 2 work on the basis of a cordless drill with a chest for clamping into the machine clamp 1.

Figure 3 shows how it is possible to remove weeds from joints using the appliance provided with an electrically driven handheld drill with a power cord. In this case, the rotating steel brush of the appliance rests on the ground at the location of the joint which is to be cleaned. The support frame 3 with its small wheel 4 supports the machine so that the operator can relax when holding the handle and does not have to exert any torque thereon.

35

The machine can be switched on and off by means of a Bowden cable 11 with a pulling grip 11a at the handle 10 and loop 11b around the handle of the machine 12 at the location of the operating switch 12a, as a result of which the casing 11 will  
5 depress the switch 12a when the cable 11 is pulled by means of the pull grip 11a.

The device according to the invention is not limited to the embodiment shown in the drawings and as described above.  
10 Numerous variants can be made within the scope of the invention.

For example the machine clamp may also be provided with a socket-headed clamping bolt instead of a stud with wing nut. In the case of an electric drill, the handle may also be provided  
15 with an electrical switch for switching the machine on and off, or it is possible to enable the machine to be switched on and off using a system of mechanical rods which can be actuated from the handle instead of a Bowden cable.

20 The device according to the invention can also be used in other situations or applications.

25

30

35

CLAIMS

1. Device for the removal of weeds from joints of a paving  
5 which device comprises a construction around a machine which is  
provided with a rotary steel brush, which machine is held in a  
machine clamp provided with a wing nut, characterized in that,  
to the machine clamp a support frame with a small wheel is  
mounted for the support of the machine with the rotary brush,  
10 and to which machine clamp also is mounted a shaft with handle  
to which shaft in the proximity of the machine clamp a bracket  
clamp with wing bolt is mounted, in which bracket clamp a guard  
for the rotary steel brush with an arm that is mounted to the  
guard can be mounted.
- 15 2. Device according to claim 1, characterized in that the  
machine is an electric hand drilling machine.
3. Device according to claim 1, characterized in that the  
machine is a cordless drilling machine.
4. Device according to claim 1, 2 or 3 characterized in that  
20 the shaft of the device is adjustable in length.
5. Device according to claim 1, 2, 3 or 4, characterized in  
that the operating switch of the machine can be operated by  
means of a Bowden cable extending from the handle of the shaft.
6. Device according to claim 1, 2, 3 or 4, characterized in  
25 that the operating switch of the machine can be operated by  
means of a system of mechanical rods from the handle of the  
shaft.
7. Device according to claim 1, 2 or 4, characterized in that  
the machine can be operated by means of an operating switch from  
30 the handle of the shaft.